

ELECTRONICA HI FI SAC

HiFiKits

KHM-10B

GY—HRTM203

Humidity & Temp Measuring Module

Specification

NAME	Humidity & Temp Measuring Module	Hi Fi SAC	Date	2005.10.1
TYPE	GY—HRTM203		Mould 1	2005.10.12
			Mould 2	

Used For:

Electronics, Textiles, Warehousing, Tobacco, Pharmaceutical, Meteorology
 Temperature and humidity Table, Humidifier, Dehumidifiers, Air conditioning, Microwave oven and etc.

Electrical parameters:

Humidity Sensor: Polymer Humidity Sensitive Resistor

Voltage: DC 5V±5%

Current: 2 mA

Used Temp: 0—60℃。

Humidity for used: Under 95%RH

Range of Humidity Measure: 20—90%RH

Temp for storage: - 20—70℃

Humidity for storage: under 95%RH(Non condensing)

Accuracy of Humidity Measure: ±5%RH (TEMP 25℃)

Form 1 Humidity output voltage value (Ta=25℃)

%RH	25	30	35	40	45	50	55	60
Output(V)	1.35	1.50	1.65	1.80	1.90	2.00	2.10	2.20
%RH	65	70	75	80	85	90		
Output(V)	2.30	2.40	2.49	2.56	2.65	2.74		

Standard test condition:

Test condition:

- a. Temperature : 25 ± 1 °C
- b. Power voltage : $DC5V \pm 5\%$

Characteristics Measurement

The specified conditions, put the module under test into the constant temperature and humidity box, adjust the constant temperature and humidity box to the desired humidity values, measure the output voltage after 15min

Equipment:

Temperature Generator: High-precision constant temperature and humidity box

Dew-point hygrometer

Voltmeter : DVM

Stability and reliability test :

Test Condition:

Specification values to 80% RH humidity variation as the base

The test is completed, the module must be at room temperature and moisture environment for 24 hours after

No.	Test item	Test Method	Specification Value
1	Impact resistance	The module repeated three times from the 1-meter height of free fall on hard board	Sealing-off non-invasive devices, Electrical Properties of Normal
2	Resistance to vibration-induced	Frequency Number of 10-55Hz, amplitude 1.5 mm, the X-Y-Z direction of 2 hours	Sealing-off non-invasive devices, Electrical Properties of Normal
3	Heat	Temperature of 80 °C, humidity below 30% RH air, put 1000 hours	Accuracy ± 5% RH or less
4	Cold	Temperature of 10 °C, humidity 70% RH in the air to place the following 1000 hours	Accuracy ± 5% RH or less
5	Moisture Resistance	Temperature 40, humidity 90% RH in the air put 1000 hours	Accuracy ± 5% RH or less
6	Temperature cycling test	From -10 °C below freezing, 1 hour, rising to 55 °C to place 1 hour, then transferred to -10 °C this cycle 300 times	Accuracy ± 5% RH or less
7	Organic solvent resistance	Organic solvents at room temperature: Ethanol gas temperature 30 minutes. Propanol gas temperature 30 minutes.	Accuracy ± 5% RH or less

Caution:

To avoid DC directly added to the sensitive components

To avoid the long-term components on the condensation and drying of the environment

To avoid the long-term components on the salt, acid or oxidizing gases (sulfur dioxide, hydrochloric acid, etc.).

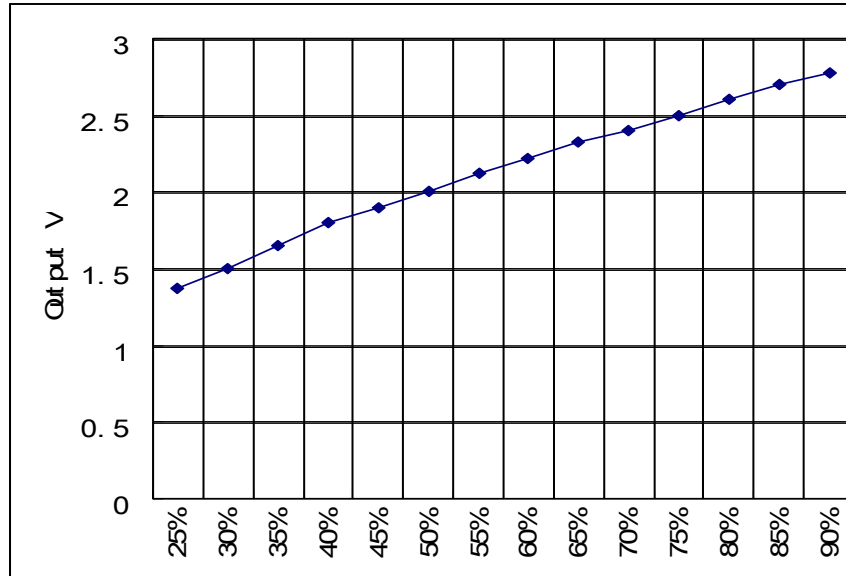


Figure 1 Humidity output voltage characteristics

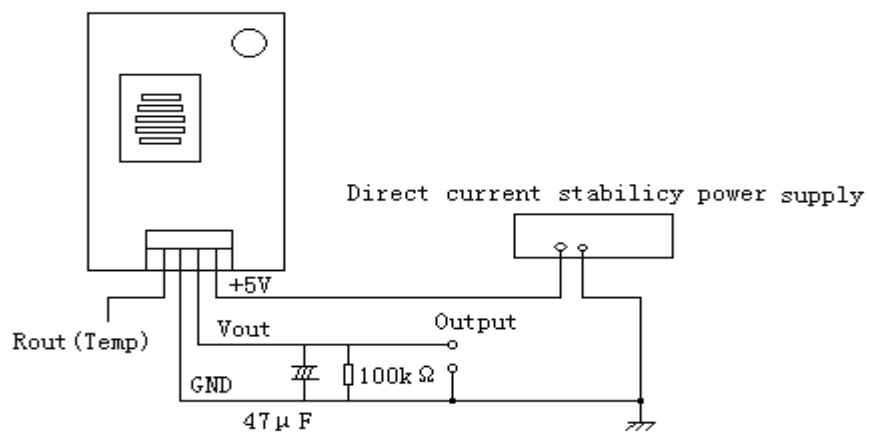
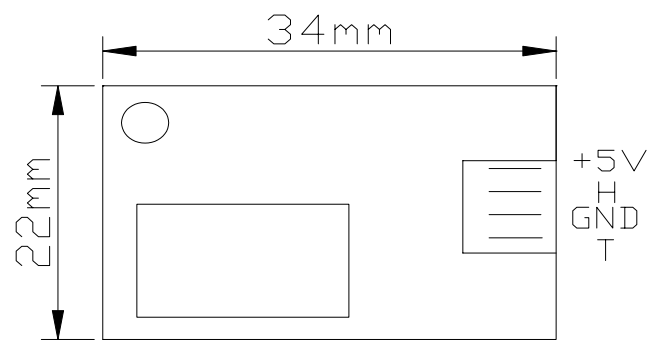


Figure 2 Appearance and Line Connection

RT Indexing Table

T	R	T	R	T	R	T	R	T	R
-39	209.1	-4	33.74	31	7.982	66	2.493	101	0.959
-38	197.1	-3	32.23	32	7.698	67	2.42	102	0.9355
-37	185.9	-2	30.8	33	7.417	68	2.349	103	0.9127
-36	175.4	-1	29.45	34	7.153	69	2.28	104	0.8906
-35	165.6	0	28.16	35	6.899	70	2.214	105	0.8691
-34	166.4	1	26.92	36	6.658	71	2.15	106	0.8482
-33	147.8	2	25.75	37	6.424	72	2.08	107	0.828
-32	139.8	3	24.64	38	6.2	73	2.029	108	0.8082
-31	132.2	4	23.58	39	5.986	74	1.971	109	0.7892
-30	125.1	5	22.58	40	5.781	75	1.916	110	0.7707
-29	118.4	6	21.62	41	5.583	76	1.862	111	0.7527
-28	112	7	20.72	42	5.393	77	1.81	112	0.7351
-27	108.1	8	19.85	43	5.211	78	1.78	113	0.7181
-26	100.5	9	19.03	44	5.036	79	1.711	114	0.7015
-25	95.3	10	18.25	45	4.867	80	1.665	115	0.6854
-24	90.37	11	17.5	46	4.706	81	1.619	116	0.6698
-23	85.73	12	16.78	47	4.551	82	1.575	117	0.6546
-22	81.37	13	16.1	48	4.401	83	1.532	118	0.6398
-21	77.25	14	15.45	49	4.258	84	1.481	119	0.6254
-20	73.38	15	14.83	50	4.12	85	1.451	120	0.6114
-19	69.71	16	14.24	51	3.987	86	1.413	121	0.5978
-18	66.28	17	13.68	52	3.86	87	1.376	122	0.5848
-17	62.89	18	13.14	53	3.737	88	1.339	123	0.5717
-16	59.92	19	12.83	54	3.619	89	1.304	124	0.5591
-15	57.01	20	12.14	55	3.505	90	1.271	125	0.5489
-14	54.27	21	11.68	56	3.395	91	1.238		
-13	51.68	22	11.23	57	3.29	92	1.206		
-12	49.23	23	10.8	58	3.188	93	1.178		
-11	46.91	24	10.39	59	3.09	94	1.145		
-10	44.72	25	10	60	2.996	95	1.116		
-9	42.63	26	9.625	61	2.904	96	1.088		
-8	40.68	27	9.267	62	2.816	97	1.06		
-7	38.78	28	8.924	63	2.731	98	1.034		
-6	37.01	29	8.597	64	2.649	99	1.008		
-5	35.33	30	8.283	65	2.57	100	0.9832		